IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

AMPEX CORPORATION,	)	
	)	
Plaintiff,	)	
	)	C.A. No. 04-1373 (KAJ)
v.	)	
	)	**PUBLIC VERSION**
EASTMAN KODAK COMPANY,	)	
ALTEK CORPORATION, and	)	
CHINON INDUSTRIES, INC.,	)	
	)	
Defendants.	)	
	)	

AMPEX CORPORATION'S RESPONSIVE CLAIM CONSTRUCTION BRIEF

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NATURE AND STAGE OF THE PROCEEDING

Plaintiff Ampex Corporation ("Ampex") submits this Responsive Claim

Construction Brief regarding the patent in suit, U.S. Patent No. 4,821,121 ("the '121

patent"), in connection with the Claim Construction Hearing, pursuant to Paragraph 12 of

the Scheduling Order. In addition to the declarations submitted with Ampex's Opening

Claim Construction Brief (D.I. 300) ("Ampex Br."), filed May 23, 2006, Ampex submits

a Supplemental Declaration of Norman H. Beamer Submitting Evidence Relevant to

Claim Construction ("Beamer Supp. Ex. _")[1] accompanying this brief.

SUMMARY OF THE ARGUMENT

Kodak's claim construction brief is litigation-inspired and disingenuous. Outside

the context of this litigation, Kodak has revealed its clear knowledge that Ampex's '121

invention could not be limited either by the appearance of movement or by television

standards. Kodak is well aware that the very purpose of Ampex's '121 invention comes

from its automatic operation. Complex sequences of manual commands are neither

required nor acceptable.

Nonetheless, in attempts to avoid infringement and to champion art far less

material than the art that was cited and distinguished during the '121 prosecution,

defendants Eastman Kodak Company, et al. ("Kodak") proffer incorrect constructions of

claim terms and phrases. In this responsive brief, Ampex sheds light on what Kodak

already knows but would hide from sight: Kodak's constructions are incorrect.

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[1] References to "Beamer ¶ _" are to the May 23, 2006 Declaration of Norman H. Beamer
Submitting Evidence Relevant to Claim Construction (D.I. 307). In addition, references
to "Boncelet ¶ _", "Cavallerano ¶ _", and "Ligler ¶ _" are to the Declarations of Charles
Boncelet (D.I. 309), Alan Cavallerano (D.I. 310) and George Ligler (D.I. 308),
respectively, that were submitted on May 23, 2006 in Support of Ampex's Opening
Claim Construction brief.

STATEMENT OF FACTS

During the ITC investigation, Kodak hinted at its claim construction positions piecemeal, through various expert witness reports and deposition testimony, resulting in a multiplicity of confusing and contradictory positions, and last-minute fundamental changes. That pattern has continued in this action even under the formal claim construction disclosure process established by the Court. A remarkable aspect of Kodak's claim construction is the inconsistent positions that Kodak's experts have taken on various claim terms: using narrow constructions to try to avoid infringement, but broad constructions for the same terms to try to cover irrelevant prior art.[2]

Kodak puts on blinders in surveying the claim construction issues. Kodak ignores the real world prior art environment from which the '121 invention arose and ignores the actual operation of the '121 invention. Instead, Kodak focuses on insignificant side issues, such as one specific commercial application of the preferred embodiment (television broadcasting), the resulting signal characteristics of the video input to, and video output from, the preferred embodiment of the invention, and the presence or absence of standard image processing techniques in embodiments of the invention (*e.g.*, "white balance") that have nothing to do with the invention. As a result of its "blinders" approach, Kodak obscures the '121 patent's inventive contributions over the prior art.

In response, Ampex shows the invention in its proper light via the Statement of Facts in its opening claim construction brief, and also submits herewith a copy of

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[2] Given this approach by Kodak, its criticism of Ampex for modifying some of its claim construction proposals is off-base. (Kodak Br. 1). Kodak fails to mention that Ampex, unlike Kodak, voluntarily provided its preliminary construction positions during the ITC investigation, when there was no obligation to provide them. Ampex's subsequent changes have clarified some definitions, and added others in response to brand new arguments proffered by Kodak.

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portions of a 1983 ESS-3 demonstration videotape, and a 1984 ESS-3 brochure, which accurately demonstrate and place in proper context the system of the '121 patent. In particular, these materials show how one of ordinary skill in the art would have understood the '121 inventions in 1983. (Beamer Supp. Exs. 37-39).

Illuminated by the real world examples of how Ampex's '121 invention is actually used, Kodak's erroneous claim constructions wilt away:

- Ampex's '121 invention stores still pictures, including "photographs, artwork and electronically produced graphics." And, it replaces the old way of displaying a still image: "an easel card or a slide" (Beamer Supp. Ex. 37-38). Kodak's attempt to limit the claims to motion video is totally inconsistent with these facts.

- Ampex's '121 invention made *automatic* fast browse possible: "For visual identification, or for browsing, reduced size images with ident numbers are presented 16 at a time, allowing a quick and positive review of an entire on-line library" (Beamer Supp. Ex. 37-38). "ESS-3 lets you 'pop' 16 reduced size images up on your screen almost instantly" (Beamer Supp. Ex. 39 at AX018842). Kodak's attempt to construe the claims to read on cumbersome and sluggish manual operations is absurd.

- Ampex's '121 invention made possible a system in which "[e]ach small image carries its own pack and identification number, so the full-sized version may be easily recalled when desired" (Beamer Supp. Ex. 39 at AX018842). Kodak's attempt to construe the claims to read on systems which generate reduced size images that maintain no relationship with the full size images that they were generated from completely misses the point of the automatic browse function.

Not surprisingly, Kodak persists in its effort to confine Ampex's '121 invention to the field of television broadcasting (Kodak Br. 2-3). As Ampex has demonstrated, that mischaracterizes the applicable field (Ampex Br. 17; Ligler ¶¶ 12-18). The extent of Kodak's self-blinding strategy is revealed by the fact that Kodak's own experts have repeatedly disavowed such a narrow characterization of Ampex's '121 patent:

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- Mr. Herot defined the art of the '121 patent as: "the general field of *computer graphics more than the particular field of television* or cameras or video or any of those things" (Beamer ¶ 42, Ex. 29).

- Dr. Preuss on page 16 of his deposition transcript, indicated that the claims of Ampex's '121 patent were *not limited to television broadcasting systems*, and agreed, "At least they could be applied also to the pre-press systems in the pre-press field, pre-press area" (Beamer ¶ 43, Ex. 30).

- Mr. Stansfield defined the pertinent art as: "the field of dealing with digital images." Additionally, Mr. Stansfield testified: "*I do not believe the claims to be limited to television systems*" (Beamer ¶ 44, Ex. 31).

- Dr. Myers defined the pertinent art as: "video processing of images and image processing" (Beamer ¶ 45, Ex. 32).

ARGUMENT

I.   "VIDEO"

As set forth in Ampex's opening brief, a "video image," as used in the claims, is an electronic signal representation of visual information that is displayable. (*Construction 3*).[3] This definition is supported by the intrinsic and extrinsic evidence that Ampex has already presented (*e.g.*, Ampex Br. 13-14), and is confirmed by one of the dictionaries that Kodak submits: "video signal: picture signal." (*Webster's Third New International Dictionary*, Kodak Appendix (D.I. 301), A-006).

In an attempt to bypass this hard evidence, Kodak sampled selectively from varying expert opinions in an attempt to narrow unduly the term "video." At first, in his May 10, 2005 Expert Report in the ITC investigation, Kodak's expert, Dr. Storer, attempted to narrow video to television broadcast standards:

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[3] "*Construction _*" refers to the Joint Claim Construction Chart For U.S. Patent No. 4,821,121 (D.I. 305).

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At his ITC deposition, Ampex confronted Dr. Storer with the substantial evidence that video had a broader meaning in 1983 (also discussed and cited at Ampex Br. 17-19; and *supra*, p. 3). After that, Kodak switched course and defined "video" as a "series of related electronic images created for rapid display to allow the appearance of movement." (*Construction 1*). This requirement of the appearance of movement is just another unduly restrictive definition of "video" (Ampex Br. 14-17).

Even now, in its opening claim construction brief, Kodak maintains both of its unsound constructions. Both constructions would improperly restrict the scope of the claims to collateral aspects of the preferred embodiment that have nothing to do with the '121 invention itself.

The disingenuousness of Kodak's position is revealed by its own statements, made outside the context of this litigation. Kodak contradicts its litigation-inspired constructions. Kodak's "History of Kodak" web site records: "1987 – The company entered the electronic *still-video* market with seven products for recording, storing, manipulating, transmitting and printing *electronic still video images*" (Beamer Supp. Ex. 41).

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Kodak well knew then that "video" did not require the appearance of movement.

In addition, a Kodak patent, U.S. Patent No. 5,440,343 to Parulski, which Kodak has identified as embodied in the cameras accused of infringement in this litigation,

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discloses "an electronic imaging system that records *both motion and still video images*" (Beamer Supp. Ex. 43, Abstract; column 2, lines 3-4; Beamer Supp. ¶ 15). The motion video images are "medium resolution motion images at a standard frame rate" for a "motion" mode. The still video images are "high resolution still images at a much lower frame rate" to "record a still image" in digital form on flash memory (Column 1, lines 6-13, 55-68; column 2, lines 1-9; and column 3, lines 17-37). Significantly, these "still video images" are scanned just once, at a frame rate slower, and at a resolution higher, than for standard television. *Id.*[4] Before this litigation, Kodak surely understood that "video" encompassed still and motion images. Before this litigation, Kodak surely understood that this technology had applications besides standard television.

Other Kodak patents are to like effect (Beamer Supp. ¶¶ 9-14). And a patent naming Kodak's expert as inventor uses the phrases "video image[]" and "electronic image" interchangeably, in the context of "[e]lectronic imaging cameras for recording still images." (Beamer Supp. Ex. 51, U.S. Patent No. 4,779,142, 1:11-20).

Kodak's constructions are nothing more than a self-serving attempt to limit the claims to the preferred embodiment. Kodak puts on its "blinders" when it examines the preferred embodiment of Ampex's '121 patent. Kodak ignores the digital image data that is actually being stored and retrieved in the claimed system. Instead, Kodak seeks to exploit an irrelevancy — the fact that the preferred embodiment is able to accept video signal input, and generate video signal output, that each are compatible with 1983-era United States standard television format (*e.g.*, Kodak Br. 6). Ampex's '121 patent claims, however, are directed to storage of video images and video data *within* the

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[4] The Parulski patent is thus in accord with the intrinsic evidence: cited reference, EP 0051305A1, which also characterizes an image resulting from a single slow scan as "video." (Ampex Br. 16).

claimed system, not the format of the video signal that is ***input to*** or ***output from*** the

system. In the preferred embodiment, the input video is significantly processed (*see*

Ampex Br. 21), during which all vestiges of standard television broadcast format are

removed from the data before the data is stored ('121 patent, 3:1-34; Beamer Supp. ¶ 17).

It is necessary to focus on the data that is actually stored in the claimed system. It is

simply digital data representing images. Once that data is stored, it is "untraceable" in

the sense that there are no longer any vestiges of television broadcast format in that data.

The television broadcast provenance (in the preferred embodiment) of such images is

immaterial to the meaning of "video" in the claims.

Going form one extreme to the other, Kodak skips from the input, all the way to

the output — relying on the television output described in Ampex's '121 patent

specification. Yet, the output characteristics are irrelevant according to Kodak's own

criteria. Kodak's cameras are also able to output stored still images as video signals that

are compatible with standard television. Despite this, Kodak argues that its cameras do

not store video images or video data. (*E.g.*, Initial Expert Report Of James Storer, ¶ 62

(Beamer Supp. Ex. 53); Kodak DX7630 User's Guide, p. 33 ("Displaying pictures . . . on

a television") (Beamer Supp. Ex. 54)). Moreover, in the '121 preferred embodiment, the

video output is generated only after output processing circuitry restores those TV

characteristics ('121 patent, 4:31-40). Thus, the "video" characteristics for both the input

entering the '121 system, and the output leaving the system, are decoupled from the

claimed "video images" and "video data" stored in the '121 system itself. The nature of

the input and output is not dispositive of the meaning of "video" in the context of claims.

Kodak's expert also asserts that the process of "capturing" video images is limited to motion video. (Storer ¶ 47).[5] To the contrary, as described in the '121 patent, image capture encompasses *both* the scanning and input of a single frame of a still video image, *as well as* "grabbing" a frame from the multiple frames of a motion video input: "The video input circuit 12 may be another electronic still store system, a TV camera, or some other source of video data from which *one or more* frames of a video image may be captured." ('121 patent, 2:65-3:1; Ampex Br. 16). Importantly, motion video input is merely used as one type of source for the still video images that are stored in the system.

Kodak's expert mischaracterizes this capture process, asserting that claim 7 "specifically refers to a 'succession' of images, which connotes a series of individual frames of a video image, as in a television signal having 30 frames a second." (Storer ¶ 47). Not true — examination of claim 7 reveals that the "succession" of images are simply the images stored in the bulk storage memory of the claimed apparatus, one after the other — first one image is stored, then another image is stored, and so on. A given image could be grabbed from a TV camera covering a motion video football game on one day, and the very next stored image obtained by scanning a still photograph an hour, a day or a week later. There is no relationship, let alone an allowance for "appearance of movement," between the "successive" images stored in the claimed apparatus. (*See also* Beamer ¶¶ 21-22).

Kodak also mischaracterizes the testimony of Ampex's experts. (Kodak Br. 7).

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[5] "Storer ¶ _" refers to the May 23, 2006 Declaration of James Storer In Support Of Defendants' Opening Claim Construction Brief (D.I. 311).

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Kodak selectively quotes from the deposition testimony of ex-Ampex employees, none of whom had any role in developing the '121 invention or prosecuting the '121 patent (Kodak Br. 8). But Kodak turns a blind eye to the testimony of Daniel Beaulier, the inventor of the '121 patent, who unequivocally testified that "the term video to me refers to an electronic image." As to the term "video still store," Beaulier offered this definition:

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Kodak's expert argues that Ampex's definition is too broad because it would equate "video image" with "electronic image," and thus encompass electronic signal representations of facsimiles and scanned photocopies. (Storer ¶ 52). This is not a valid

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[6] Kodak also mischaracterizes Dr. Ligler's testimony — he confirmed that an IEEE Dictionary definition that was specifically labeled as pertaining to "television" was accurate "as it pertains to television." (Kodak Appendix (D.I. 301) A-636, p. 292:12-16). But that begs the question of whether the term "video" is limited to "television." It is not, as Dr. Ligler has explained in his declaration submitted with Ampex's Opening Claim Construction Brief. (Ligler ¶¶ 29-68). Indeed, the same dictionary, about which Kodak questioned Dr. Ligler, gives a definition of "video" in the context of "radar." This shows that "video" is a term used in wide-ranging contexts, not exclusively in television. (Beamer Supp. Ex. 56).

criticism. As already pointed out, the intrinsic evidence (like the extrinsic evidence) establishes that "video" was used to describe precisely such electronic images, generated from single frame scans of documents. (Ampex Br. 16-17; *see also* Beamer Supp. ¶ 25).

Kodak also attempts to invoke the "steel baffles" *dicta* in the *Phillips* case (Kodak Br. 8-9), asserting that Ampex's definition of "video image" encompasses all images, and that its definition of "video pixel data" encompasses all "pixel data," supposedly rendering the word "video" superfluous. But, outside the context of the '121 patent, the term "image" is much broader than "video image" — a painting, drawing, or optical projection, transmission or reflection through a lens or from a mirror are all "images," but are not "video images."[7] Likewise, outside the context of the '121 patent, "pixel data" is broader than "video pixel data."[8] For example, a photographic plate is not a video image, but can be made up of pixels:

> "**Pixel**. An individual, identifiable element of a picture. For example, a large astronomical photographic plate may contain as many as 100,000 or more picture elements (pixels)." *Van Nostrand's Scientific Encyclopedia* (Beamer Ex. 5).

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[7] The '121 patent specification and claims use "image" and "video image" interchangeably, and there is no evidence or suggestion that they are anything other than synonymous in the context of the claims. *E.g.*, Abstract, 1:19, 1:28, 1:67, 2:19, 2:64, 3:61, etc.; claims 1-9, 11-15 ("image"); 1:16, 2:2, 2:22, 2:68, etc.; claims 5, 7, 8, 10, 14 ("video image"). No infringement or validity issues in this case hinge on any difference between those terms.

[8] The '121 patent specification and claims use "video data," "video image data," "pixels of video data," and "video pixel data" interchangeably and there is no evidence or suggestion that they are anything other than synonymous in the context of the claims. *E.g.*, 2:67-68, claim 8 ("video data"); Abstract ("video image data"); 3:22 ("pixel of video data"); claim 7 ("video pixel data"). **REDACTED**

No infringement or validity issues in this case hinge on any difference between those terms.

Thus Ampex's definition of "video image" and "video pixel data" does not render "video" superfluous, or "read the term out of the claims." (Kodak Br. 8). Moreover, within the context of Ampex's '121 patent, it is appropriate, unremarkable, and insignificant to any claim construction issues that the author of the patent used "video image" and "image" interchangeably, and used "video pixel data" and "video data" interchangeably. *See, Pickholtz v. Rainbow Techs.*, 284 F.3d 1365, 1373 (Fed. Cir. 2002) (finding "computer" and "computer system" synonymous, even though this renders "system" surplusage); *Tate Access Floors v. Maxcess Techs.*, 222 F.3d 958, 968 (Fed. Cir. 2000) ("That a patentee chose several words in drafting a particular limitation in one claim, but few (though similar) words in drafting the corresponding limitation in another, does not mandate different interpretations of the two limitations, since defining a state of affairs with multiple terms should help, rather than hinder, understanding"); *Tandon Corp. v. U.S. Intern. Trade Com'n*, 831 F.2d 1017, 1023 (Fed. Cir. 1987) ("practice has long recognized that 'claims may be multiplied ... to define the metes and bounds of the invention in a variety of different ways' .... Thus two claims which read differently can cover the same subject matter").

II.   "SAID DATA"

Kodak's definition of data as "numerical information," as applied by Kodak, is too narrow. Kodak uses its construction to require that "said video pixel data" (and like phrases) be made up of literally the same "ones" and "zeros" — *i.e.*, the "same mathematical data" — that comprise the antecedent "data" in the claim (*e.g.*, Defendants' Opening Brief In Support Of Their Motion For Summary Judgment Of Noninfringement (D.I. 304), p. 28). This is another example of Kodak wearing "blinders" and ignoring the practical reality of Ampex's '121 invention. Impossibly, Kodak's definition would cause the preferred embodiment to fall outside the scope of the claims. (Ampex Br. 21-22).

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Such a construction is "rarely, if ever, correct." *Dow Chem. Co. v. Sumitomo Chem. Co.,* 257 F.3d 1364, 1378 (Fed. Cir. 2001), (*quoting Vitronics Corp. v. Conceptronic, Inc.,* 90 F.3d 1576, 1583 (Fed. Cir. 1996)).

In contrast, Ampex relies on the well-accepted definition of "data" as synonymous with "information." Thus, in the context of the '121 patent, "data" is information, in any form, representing a video image.[9] (Ampex Br. 20). (*See also:* "Data: Information operated on during program execution," *Dictionary of Industrial Digital Computer Terminology,* Beamer Supp. Ex. 61). One of ordinary skill in the art would use this definition of data, because it is in accord with the illustrative embodiment. In that embodiment, the same information for the image is obtained from the video input, stored, and subsequently output, notwithstanding that the mathematical representation of the data changes substantially as it flows through the system. (Ampex Br. 20-22).

Once "data" is properly defined, the issue of the antecedent to "said data" and like terms falls into place. Using claim 7 as an example, the random access memory means stores video pixel data representing images, and the bulk memory means receives "said video pixel data" for storing and outputting the images. It does not matter if what is stored in the random access memory and what is received by the bulk memory are the same "ones" and "zeros." What matters is that the same *information* for the same *images* is stored and received. Kodak's expert put it correctly when he said, "a user of a still store system would expect that ... a news broadcast would always show the same

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[9] As a practical matter, Ampex's definition is very similar to Kodak's actual definition (as opposed to the way Kodak applies its definition), in the sense that the image data is information in numerical form. But Kodak is attempting to put a further spin on its proposed construction, to require that the exact numbers representing the numerical information remain rigidly unchanged. What is important is that the *information* faithfully represent the same image throughout the system, and Ampex's construction is faithful to that principle.

image with the same data." (Storer ¶ 64). The user would not care about the "ones" and "zeros;" *i.e.*, the behind-the-scenes underlying mathematical representation of the image — all that the user is concerned with is that the necessary information be preserved such that the image that is captured be the same image that is stored, and then, when selected for use, be the same image that is retrieved.

Kodak complains that Ampex is trying to "broaden the very basic still store system described and claimed in the '121 patent to encompass the intricate image processing that takes place in the accused digital cameras" (Kodak Br. 12). The presence or absence of the "intricate image processing" that Kodak refers to, however, is irrelevant to Ampex's '121 invention.

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The '121 patented system "does not care" about these image processing techniques, in the sense that the invention is not directed to, or dependent on, such techniques. With all due respect to Kodak's efforts to capture high quality images, that has no relevance to this action. The claim construction should not "care" whether or not those techniques are being used, or where in the system they are implemented.

Notably, when it suits its purposes, Kodak has taken a very different position as to whether an image or signals comprising an image can be processed, and still be referred to as the same image or image signals.   **REDACTED**

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[10] Prof. Boncelet will provide a declaration to this effect in support of Ampex's opposition to Kodak's motion for summary judgment of noninfringement. In the meantime, pertinent excerpts of his expert report are submitted as Beamer Supp. Ex. 62.

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Kodak's position then was in diametric opposition to the position taken with respect to the "said data" limitation of Ampex's '121 patent.

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Surely, Kodak can not have it both ways.

III.   "DIRECT TRANSFER"

Kodak's proposed construction of direct as "the transfer of data without intervening circuitry" (*Construction 21*), taken literally, is nonsense. It is impossible to transfer data from a disk to a RAM, or between a size reducer and a RAM, without going through buffer or latch circuitry or the like (Ligler ¶¶ 97, 110-112). Indeed, Kodak and its expert appear to suffer from a certain schizophrenia about this proposed construction, as they support it in one sentence and disavow it in significant respects in the next (Kodak Br. 14; Storer ¶¶ 67-68). Kodak's supportive side argues that the '121 Figure supports its construction, and relies on a statement in the prosecution history distinguishing the Taylor '776 patent. Kodak's disavowing persona offers a new construction, apparently based only on the '121 Figure and disregarding the literal language in the prosecution history that it had previously relied on. This brand new construction defines "direct" as "without passing through the CPU [central processing unit] or any other circuitry that would permit processing" (Kodak Br. 14; Storer ¶¶ 68,70).[11] This latter construction would thus allow for intervening circuitry, and is very different from Kodak's previous construction. But neither construction is correct.

The prosecution history supports neither of Kodak's constructions of "direct." In this instance, Kodak's blinders have masked all but one phrase, "with no other circuit therebetween" — a phrase that Kodak lifts from an extended dialog, spanning four papers in the prosecution history, during which Ampex distinguished the '121 patent from the

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Taylor '776 patent. Although somewhat lengthy, it is suggested that at least the

following excerpt should be considered, to place Ampex's statement in proper context:

> [The claims] are not fully met by the cited reference to Taylor et al. For
> example, Claim 18 recites, *inter alia*, a random access memory means
> (frame store 22) for individually storing ... succession of full size images
> ... and a corresponding reduced size version thereof at said second
> resolution (underlining added). Taylor et al fails to describe and does not
> intend the storage of both a reduced size and a full size image in his frame
> store (14/24 or 124/125) in the manner of applicant. In fact, any size
> reduction, and thus reduced size image, is made on the full size image
> only at the time the latter is transferred from the disk storage (18/20) to the
> frame store (24/124/125) as depicted in FIG'S 5, 18 and 19, or from the
> frame store to the disc storage as depicted in FIG. 19. Applicant's
> invention on the other hand, as described and claimed, provides image
> reduction via his size reducer (26) coupled only to the frame store (22),
> and which receives the full size image only from the frame store whenever
> there is no reduced size image, and which then returns the reduced size
> image directly back to the frame store for storage thereof simultaneously
> with the corresponding full size image.
>
> <div align="center">* * *</div>
>
> In any event, Taylor et al fails to store both the full size image and its
> reduced size version in his frame store as described and claimed by
> applicant .
>
> <div align="center">* * *</div>
>
> Accordingly, Claims 18, 19 and 23 are variously amended
> herewith to further clarify the language thereof over the reference to
> Taylor et al. Claim 18 recites *inter alia*; a "random access memory means
> for ... storing video pixel data representing ... full size images ... and a
> corresponding reduced size version thereof at said second resolution";
> bulk memory means which stores both size images and which transfers
> either size of the images directly back to the random access memory
> means, *with no other circuit therebetween* [emphasis supplied]; and
> means for generating the reduced images from the full size images and
> returning both directly back to the contents of the random access memory
> means. Taylor et al fails to teach the above features of storing both image
> sizes simultaneously in the random access memory, the direct transfer of
> images between the disc storage and random access memory, or the
> transfer of images directly between the size reducer and only the random
> access memory.
>
> Likewise, Claims 19 and 23 also recite the above features in
> differing language and terms, and thus are not anticipated by Taylor et al

<div align="center">16</div>

for the same reasons given above. (Cavallerano ¶ 66).[12] (underlined emphasis in original).

The "with no other circuit therebetween" statement was thus part of an argument differentiating the Taylor '776 patent from the architecture of Ampex's '121 patent. In particular, unlike Taylor '776, the reduced size images in Ampex's '121 patent are not "made on the full size image only at the time the latter is transferred from the disk storage (18/20) to the frame store (24/124/125) as depicted in FIG'S 5, 18 and 19, or from the frame store to the disc storage as depicted in FIG. 19." (*Id.*). That is, unlike Taylor '776, the size reducer is not interposed between the bulk store and the RAM in the '121 patent (*See* Cavallerano ¶¶ 62-65, 67-68, Exs. B, C). Given this context, one of ordinary skill would recognize that "with no other circuit therebetween" would not be taken to its literal extreme, but was merely meant to refer to the fact that the '121 patent did not have a size reducer (and by logical extension, other significant processing) interposed between the bulk store and the RAM.[13]

Turning to Kodak's mistaken view of Ampex's '121 Figure, that figure does not support either of Kodak's constructions of "direct." As already discussed, the "without intervening circuitry" construction is wrong because it leads to nonsense. It is also wrong because anyone of ordinary skill in the art would know that the block diagram level of the '121 Figure omits the low level buffer or latching circuit details inherent in any system of the type shown in the Figure. As Dr. Ligler explained, and as the Zilog Z-80 data sheets

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[12] Application claims 18, 19 and 23 issued as claims 7, 8 and 10, respectively. (Cavallerano ¶ 66).

[13] In any event, an obviously erroneous statement by a prosecuting attorney is not binding on the applicant. (Ampex Br. 11).

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that he submitted with his declaration show, data transfers from disk to RAM had to be buffered (or latched), at the very least (Ligler ¶¶ 97-106, Exs. 17-18).[14]

The fact that Kodak has come up with a new construction of "direct" — "without passing through the CPU" — shows that its old construction (which is still Kodak's proposed *Construction 21* in the Joint Claim Construction Chart) is wrong. But Kodak's new construction of "direct" is also wrong, and equally unsupported by Ampex's '121 Figure. Kodak's blindered view of the '121 Figure ignores that the CPU in the Figure controls the entire system, including controlling the transfer of data among all of the other components of the system. As Dr. Ligler explained, one of ordinary skill would have known that, consistent with the Figure, a standard way to transfer data from bulk memory to RAM would be via registers within the CPU (Ligler ¶¶ 97, 101, 106). Significantly, statements by four Kodak experts, Dr. Shoup, Mr. Herot, Mr. Taylor, and Dr. Myers, establish that transfers between bulk store and RAM via the CPU, or via other significant circuitry, satisfy the "direct" limitations of the claims (Beamer Supp. ¶¶ 29-32)

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Kodak argues that Ampex's definition of "direct" is unsupported by the intrinsic evidence. Ampex does rely, for the first part of its construction of "direct," on the standard dictionary definition of "direct" — "not circuitous or roundabout" (Ampex Br.

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[14] The Zilog data sheets are very pertinent to claim construction, because they are contemporaneous descriptions of the very CPU that is used in the '121 preferred embodiment and depicted as "CPU 16" in the Figure. ('121 patent, Figure; 3:34-36).

29). That definition is appropriate given the context of "direct" in the claims. The second part of Ampex's definition, "not significantly processed," is the common sense generalization of Ampex's representations to the Patent Office, discussed above. Although Kodak relies on the '121 inventor's definition of direct, it actually supports Ampex's definition of direct transfer as "from the disk to frame store without any intervening ... processing or changing." (Kodak Br. 14). For Ampex's '121 patent, data is transferred between the bulk store and the RAM without size reduction, or other such significant processing.

Kodak criticizes "significant processing" as undefined (Kodak Br. 15). One of ordinary skill, however, would understand that, in the context of the '121 patent, the primary example of significant processing is size reduction. That is ample guidance to apply this construction. The point of "significant" in this context is to allow the use of buffers and latches as part of the data transfer process, but to bar actual processing such as size reduction. Indeed, Dr. Storer uses "significant processing" in the same context without hesitation:

> A person of ordinary skill in the art looking at [the '121 Figure] would understand that a direct transfer between boxes on the diagram would mean that there is no box in between that would permit *significant processing*. (Storer ¶ 68).[15]

IV.   "AN INPUT PORT AND AN OUTPUT PORT"

There is nothing in the intrinsic evidence that would support Kodak's proposed construction that the "input port" and the "output port" of claims 8 and 14 must be

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[15] Although clear, Dr. Storer's statement is incorrect. The CPU is involved in all transfers between all blocks, and the CPU is of course also capable of significant processing. The "direct" limitation of claims 7, 8 and 10 rules out significant processing during the transfer, but does not rule out data passing through the CPU without significant processing when the CPU is performing its normal data transfer role.

separate physical ports. Kodak blows out of all proportion the significance of these two

phrases to the claims or to Ampex's '121 invention. Examination of claims 8 and 14

readily reveals that the phrase "input port" is simply a label, introduced in the first

element of the claims, and then used in the third element of the claims. The "input port"

label identifies where the "bulk storage memory ... present[s] selected groups of video

data" (e.g., claim 7, element 3). The "output port" is not used as a label, and appears to

be included because, once the "input port" is called out, the "output port" would logically

be accounted for as well. But this says nothing about whether "input port" and "output

port" must be physically distinct. As previously discussed, it was common in 1983 to

have an input port share the same physical port with an output port, and RAMs with

separate physical ports were specifically called "dual ported memories," a term that

appears no where in the patent or prosecution history. (Ampex Br. 34-35).

Kodak would divine support for its construction from the arrows of the '121

Figure. (Kodak Br. 16). As discussed above, reaching such structural conclusions from a

high level block diagram is unsound, supra, p. 17. Kodak undertakes to prove too much,

because the frame store of the Figure has three arrows entering it and three arrows

leaving it. But these are simply functional indications of the flow of data, and would not

be taken by one of ordinary skill to define physical port structure.

Kodak also attempts to build up a claim differentiation argument, by pointing out

that the RAM of claim 7 does not specify input and output ports, concluding that the only

way to distinguish claim 7 from claim 8 is to adopt Kodak's dual port memory

construction. (Kodak Br. 16-17). That is not the law. There is no requirement that

corresponding elements of two independent claims must have different scope. There are

a number of actual differences between claim 7 and claim 8, and so it is not necessary to

read an additional difference into the claims in regard to memory ports. It is well-

established that "two claims which read differently can cover the same subject matter,"

supra, p. 11. Instructive on this score is *Pickholtz,* 284 F.3d at 1373, in which the Court

found "computer" and "computer system" to be synonymous, even though that arguably

rendered the term "system" surplusage. The Court rejected essentially the same·

argument that Kodak makes here: an argument that "computer system" included input

and output peripherals, while "computer" referred only to the CPU itself.[16]

The error of Kodak's construction is confirmed by the fact that Kodak's invalidity

experts rely on a number of references as disclosing the limitations of asserted claims 8

and 14, but which have a single physical port that acts as both the input port and the

output port.

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In his deposition, the inventor of the

Harada patent testified that this memory would not need to be dual-ported. (Beamer

Supp. ¶ 69). Other art that Kodak relies on also lacks physically separate input and

output ports. (Beamer Supp. ¶¶ 35-37).

V.   **"EXTERNAL SOURCE"**

Just as Kodak tries to misinterpret the "input port" and "output port" of claims 8

and 14, Kodak would impart an unjustified structural limitation from the use of "external

source" in claim 12. But the adjective "external" in claim 12 is merely intended to be

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[16] *General American Transp. Corp. v. Cryo-Trans, Inc.,* 93 F.3d 766, 770 (Fed. Cir.
1996), on which Kodak relies, is inapplicable. In that case, the Court held that an
element that required a plurality of holes to be "adjacent each of said side walls and end
walls" required structurally distinct holes for the side walls and the end walls. But the
claim as a whole imposed this physical requirement, as did the specification and
drawings. 93 F.3d at 768, 770. In contrast, the '121 patent says nothing about any
structural separation between the input port and the output port.

descriptive of one of two sources of images in the claimed system: one source provides external images that enter the system from the outside world (the "external source"), and the other source provides images that are already stored inside the system (the "image store"). The claim specifies an "external source" in element one so that it can be used to define the functionality of the "memory" in element five, which further specifies that the "memory" is "responsive" to either of two sources: "said memory being responsive to either the external source or the image store...."

Ampex's construction thus follows from this organization of the claim: the "external source is a source of video images [from] outside of the image store" (*Construction 31*). To require the external source to be in a separate physical location, as Kodak would have it, is an unjustified attempt to read a structural limitation from the preferred embodiment into the claim. Kodak's analogy of an "external mouse" (Kodak Br. 17) is not apt. A proper example would be "external input" — the input structure itself is not necessarily external to the system, but it accepts input coming from outside the system.

Kodak is simply wrong when it asserts that "source" modifies "video still store system," and therefore the source must be "external to the components that make up the video still store system." (Kodak Br. 18). To the contrary, the claim states that the video still store system is "compris[ed]" of, *inter alia*, the external source, and so by definition the external source can not be outside of the claimed system.

Kodak again invokes the argument that Ampex's construction reads "external" out of the claim. (*Id.*). However, Kodak misinterprets Ampex's construction as stating the truism that the "external source is outside of the image store." That is of course true, but that is not what Ampex's construction states. As established by the fifth element of

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claim 12, the external source is a source of video images, *which video images* come from outside of the image store.

Kodak also relies on the testimony of the '121 inventor that "the source of the pictures isn't inside ... the video still store system" (Kodak Br. 18-19). But the claim language controls over such extrinsic evidence. What's more, during questioning of Daniel Beaulier, who is not a patent attorney, there was no foundation laid to make the inventor mindful of the fact that the word "comprising" is a term of art. In claim 12 "comprising" meant that the "external source" *is* part of the claimed "video still store system."

In making these arguments, Kodak is once again willfully blinding itself to the undeniable fact that its digital still cameras are nothing more than a video still store combined with a television camera in one package. Due to the steady trend towards miniaturization of components, Kodak can package together what in 1983 was separate. The claims were and are completely neutral as to how the claimed system is packaged, and whether or not the external source is inside or outside of the package.

VI.   "SELECTIVELY GENERATING"; "DETERMINES THE SELECTIVE TRANSFER"

As previously explained, the requirement in claim 7 that reduced size images be "selectively generated" is not inconsistent with the fact that reduced size images are automatically generated. (*Construction 24*, Ampex Br. 32). Ampex is *not* asserting that "selective" means "automatic." But in the context of claim 7, the selective generation is done by the CPU, automatically. In accord with the fundamental inventive concept of Ampex's '121 patent, every time a full size image is captured and stored for the first time in the system, a reduced size image is automatically generated. However, when a full size image is retrieved from bulk store, given that (normally) the reduced size image has

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already been generated, the system does not generate another reduced size image. The system thus "selectively generates" the reduced size image — there is an "element of choice" (Storer ¶ 81), but it is made by the system, not the user. (Ligler ¶¶ 115-119; Cavallerano ¶¶ 36, 76-77).[17]

To construe the claims to be broad enough to encompass a system where the user selectively and manually generates and saves the reduced size image defeats the purpose of the invention, and is contrary to the '121 specification and claims, *infra*, Section XII.

Kodak relies on a discussion in column four of the '121 patent to the effect that a reduced size image "may" be generated if a full size image received from the disk store does not contain a "corresponding" reduced size image. (Kodak Br. 20). Kodak misinterprets this passage. It is not referring to a user deciding whether or not to do something. It is referring to an optional upward compatibility feature of the system. It addresses the problem of what happens if the system (not the user) detects that, contrary to the normal operation of the system, there is no reduced size image stored in bulk store along with the full size image. If this option is activated or enabled, the system will *automatically* generate the corresponding reduced size images for each non-conforming full size image. (Ampex Br. 32-33; Ligler ¶¶ 115, 117-118; Cavallerano ¶ 76).

This is a realistic and useful option, because it was common in 1983 (as it is today) to have removable disk drives, with libraries of images swapped from one system to another. (Ligler ¶ 118; Beamer Supp. Ex. 39 at AX018842). Under this option (which

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[17] Kodak criticizes as "circular and meaningless" Ampex's definition of "selective" (Kodak Br. 21). Kodak is again ignoring what should be in plain sight. Ampex first defines "selective" as "characterized by selection," a standard dictionary definition. To complete that definition, Ampex further defines "select" as "chosen in preference to another or others." (*Construction 10*; Ampex Br. 26; Beamer ¶ 33). The parties agree that selection implies choice; the issue between the parties is rather who or what makes the choice, and under what conditions.

is claimed in claim 6, not asserted here), if a removable drive with a picture library that was not created by the inventive system is inserted, it will be brought into conformance with the invention as each nonconforming image is first encountered by the system.

Kodak argues that Ampex's construction of "selectively generating" in claim 7 is in conflict with the prosecution history. (Kodak Br. 22). Although the word "selectively" was added to the claim during prosecution, it was not done so in response to any rejection by the Examiner. (Beamer Supp. ¶ 38). There is absolutely no basis for concluding that "selective" was added to the claim for any purpose other than to characterize the above described selective operation of the system, whereby the system chose to automatically generate reduced size images in one set of circumstances (when an image was first encountered by the system), and not generate a reduced size image in other circumstances (when an image was already generated and stored).

VII.   "SELECTIVELY ACCESSING ... AND ... SIMULTANEOUSLY"

Kodak erroneously construes the last element of claim 13, and the penultimate element of claim 15, to refer to the selective access of either a single full size image or a single reduced size image. (Kodak Br. 23-24). Again, Kodak's construction ignores explicit statements in the prosecution history that explain what these limitations mean, and construes the claims so that they do not cover the preferred embodiment of Ampex's '121 patent. (*Constructions 34, 35*; Ampex Br. 36-38). The correct construction of those claim elements is that the claimed method can: (i) access a full size image; and (ii) it can access a plurality of reduced size images simultaneously. (*Id.*).

Kodak argues that the plain language of these claim elements is only consistent with its construction, and is inconsistent with Ampex's construction. But that is not so. Starting with claim 15, the phrase "one of the sets of the corresponding plurality of the reduced size reproduction images" is construed by Kodak to be a single reduced size

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image. But given the '121 specification (which, after all, is describing the improved browse screen capabilities of the '121 invention), and given the explanation of this claim element in the prosecution history, the correct interpretation of this phrase is that it refers to a particular number of reduced size images within the total plurality of reduced size images stored in the system. (Ampex Br. 37).

For example, in the preferred embodiment, the browse screen consists of sixteen reduced size images arranged in a mosaic. (Illustrated at Beamer Supp. Ex. 39, AX018842). Thus the "one of the sets of the corresponding plurality of reduced size reproduction images" refers, in the preferred embodiment, to one set of sixteen reduced size images selected from the total plurality of reduced size images. (*Construction 35*, Ampex Br. 37, n. 19). The parties agree that the corresponding portion of claim 13, "a data set representing one of the corresponding plurality of reduced size reproduction images," is construed the same way. That also refers to the access of some given plurality (*e.g.*, sixteen) of the reduced size images, selected from the entire plurality of reduced size images that are stored in the system.

Proceeding with the construction of these claim elements, the word "simultaneously" does not modify the entire element, as Kodak contends. Rather, "simultaneously" modifies the reduced size images of the browse screen, discussed in the previous paragraph. (*Construction 34*; Ampex Br. 36-38).

Kodak makes much of the fact that these claim elements were amended by the Examiner, and that the Examiner changed the word "or" to "and" (Kodak Br. 25). The reasonable explanation for this amendment, however, is that the Examiner sought to clarify that the claimed method encompassed both: (i) accessing a full size image; and (ii) accessing a plurality of reduced size images simultaneously. Prior to that amendment,

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the claim could have been construed to cover accessing only full size images (Ampex Br. 38).

Kodak also places great reliance on the placement of a comma in the last element of claim 13. (Kodak Br. 25). But Kodak fails to mention that this comma is not present at the corresponding position in claim 15 — yet Kodak asserts the same meaning for both claims 13 and 15. In addition, careful attention to the prosecution history shows that the Examiner did *not* add the comma that Kodak relies on. Nor did Ampex add that comma by amendment. The comma is simply a meaningless and inconsequential typographical error. (Beamer Supp. ¶ 39). Moreover, the presence or absence of a comma in this context is not of sufficient grammatical force or effect, that it could resolve the conflicting interpretations by the parties of this claim element one way or the other.[18]

VIII. "EITHER … OR"

Claims 7, 10 and 12 require "outputting," "transferring," or "supplying" of either a full size image or, alternatively, a plurality of reduced size images. (*Construction 20*). The parties appear to agree on this construction, but apply it differently in the infringement analysis. Insofar as Ampex is concerned, this will be a matter for the jury to decide at trial.[19]

Ampex construes Claims 8, 11 and 14 as requiring the transfer of either a full size image or, alternatively, one or more reduced size images. (*Construction 20*). Kodak,

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[18] It is for that reason that Ampex has not seen fit to obtain a Certificate of Correction for this wayward comma.

[19] *PPG Indus. v. Guardian Indus. Corp.*, 156 F.3d 1351, 1355 (Fed. Cir. 1998) ("[A]fter the court has defined the claim with whatever specificity and precision is warranted by the language of the claim and the evidence bearing on the proper construction, the task of determining whether the construed claim reads on the accused product is for the finder of fact").

however, would narrow these claims to rule out, in the second prong of this dichotomy, the transfer of more than one reduced size image. As already explained, this narrowing interpretation is objectionable because it is wrong as a matter of claim construction law. It is also untimely offered. (Ampex Br. 34).

IX.   "FULL SIZE IMAGE"

The parties differ as to whether a "full size image" must exactly fill up a screen when displayed. Kodak would limit a full size image to images that fit the size of the particular screen on which the image is displayed. (Kodak Br. 27). However, there is nothing in the '121 disclosure or file history that requires this limitation. Rather, the term "full size image" is the image that is captured and stored in the system of the invention, and from which the reduced size image is generated. (*Construction 15*; Ampex Br. 28-29).

One of ordinary skill in the art as of 1983 understood that full size images could be acquired and stored in a system, even if the monitors used to display the stored images were not large enough to display the entire window at the same time. If the entire images had to be viewed, 1983 technology had the capability of scrolling or panning the image around the display. (Beamer ¶ 29).

Kodak again attacks Ampex's construction as somehow making the word "full" in "full size image" meaningless. (Kodak Br. 27-28). This is not so. The word "full" in "full size image" has sufficient substance and import in Ampex's construction because it is counterpart to the word "reduced" in "reduced size image." The full size image is what the system starts with. The reduced size image is generated from the full size image.

X.   "CORRESPONDING"

Kodak's construction of "corresponding" is overly simplistic. According to Kodak, if a reduced size image is created, in any way, then it has a "corresponding" full size image. (*Construction 9*; Kodak Br. 28). Once a particular reduced size image is generated, the "corresponding" full size image could be moved to another location, modified, deleted, renamed, and that would make no difference, insofar as Kodak construction is concerned. Under Kodak's construction, there would never be a reduced size image that did not "correspond" to a full size image. Kodak does not explain why the criticism that it so freely (but unjustifiably) makes of Ampex' constructions does not apply here: Kodak's construction renders the word "corresponding" meaningless and superfluous.

Ampex's construction follows from the common sense interpretation of the '121 disclosure and the cited prior art that the '121 invention improves upon. The word "corresponding," and the requirement in the claims of selective output, access or transfer of images for review, mean that a relationship must be maintained between the full size image and the reduced size image that is generated from that full size image. (*Constructions 9, 11-13*). Otherwise, the purpose of the invention is negated. The improved ability to generate a browse screen quickly is to no avail unless the browse screen can be used for the same purpose as the browse screens of the prior art — to retrieve full size images. Unless there is a relationship between the reduced size images of the browse screen and the full size images that they were generated from, the browse screen can not be used to retrieve the full size images, quickly or otherwise. (*See, supra*, p. 3; Ampex Br. 25-27).

It is remarkable that Kodak relies on the one use of the word "corresponding" in the '121 specification as support for its position. (Kodak Br. 29). That portion of the

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specification proves Kodak wrong. The specification discusses the optional feature of the invention, further discussed *supra*, p. 24, that causes a reduced size image to be generated if the system encounters a full size image that does not have a "corresponding quarter resolution copy." ('121 patent, 4:12-15). Kodak does not and can not explain, if there is no relationship maintained between the full size and reduced size image, how the system can determine whether there is no reduced size image associated with a full size image. Indeed, only if the system maintains a relationship between the full and reduced size image can this option be workable. (Cavallerano ¶ 47).

Kodak also misconstrues the testimony of the '121 inventor, Mr. Beaulier. (Kodak Br. 30).

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. For the '121 patent not to include that capability as well would have been a step backwards rather than an improvement on the art. (Ampex Br. 26-27; Cavallerano ¶¶ 43-48; *supra*, p. 33).[21]

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[21] Kodak asserts that Ampex's construction of "corresponding" was litigation inspired. (Kodak Br. 1, 30). It is true that Ampex at first did not see the necessity to specifically explain that a relationship had to be maintained between the full and reduced size images in the '121 system. By Ampex's reckoning, this went without saying. Ampex realized the need for the specific construction only after Kodak chose to rely on totally irrelevant art, that manually generated reduced size images that were immediately cast adrift from the full size images that they were generated from.

XI.   "RESPECTIVE SELECTED GROUPS OF STORAGE LOCATIONS"

Kodak relies on the word "respective" in claims 13 and 15 to read a limitation

into those claims that is not there: that all of the full size images must be stored together

in one storage area, and all of the reduced size images stored in another area.

(*Construction 33*; Kodak Br. 31). There is no basis for this restrictive reading of

"respective," and it contradicts the intrinsic evidence. (Ampex Br. 36).

XII.   "RESPONSIVE TO"; AUTOMATIC OPERATION; ORDER OF
       OPERATIONS AND STEPS

A.   "Responsive To"; Automatic Operation

Kodak disputes that the claims require automatic generation and storage of

reduced size images each time a full size image is stored, or that the multi-image browse

screen of claims 7, 10, 12, 13 and 15 is automatically generated (Kodak Br. 20-22, 31-

34). As previously demonstrated, however, there are a number of reasons why Kodak

can not be right: (1) the language and logic of the claims themselves, (2) the disclosure

of Ampex's '121 specification, (3) the nature of the cited prior art that was specifically

distinguished in column one of the patent and before the Patent Office, and (4) the

unequivocal disavowals of claim scope made to the Patent Office. All these reasons

compel Ampex's constructions that require automatic operation and order of operations

and steps (*Constructions 18, 23, 26-28*; Ampex Br. 22-25).[22]

Kodak disputes, for example, that the use of "responsive to" in claims 7, 8, 12 and

14 requires automatic operation. Kodak is wrong. Ampex specifically distinguished

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[22] In the Joint Claim Construction Chart, Ampex inadvertently omitted claim 12 from its
proposed *Construction 26*, column 2 (although it included the pertinent elements of claim
12 in column 1). Ampex requests leave to amend its portion of the chart to include that
claim number in that entry. Ampex's November 4, 2005 Identification Of Claim
Construction Issues put Kodak on full notice that claim 12 was so construed.

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prior art before the Patent Office, stating that the requirement that the reduced size image

be generated "'in response' to the writing of the full size image data set into the frame

store," meant that the size reduction be done "automatically," without the "operator

[having] to orchestrate each step." (Cavallerano ¶ 57-58). Kodak would disregard this

unequivocal disavowal because the specific application claims that were being discussed

at this stage of the prosecution were later cancelled. It is well-established, however, that,

as a general proposition, words and phrases are to be construed consistently throughout

the claims. *Omega Eng'g, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1334 (Fed. Cir. 2003)

("The patentee made a clear and unmistakable disclaimer of claim scope in its

prosecution of the parent ... patent, and we presume, unless otherwise compelled, that the

same claim term in the same patent or related patents carries the same construed

meaning").

Kodak attempts to avoid this construction rule by arguing that the issued claims

do not have the exact same language as the application claims at issue when the statement

at issue was made, and that Ampex never repeated its disavowal of manual operation

(Kodak Br. 34). But the prosecution history says otherwise. The original argument

regarding "in response" persuaded the Examiner to declare the subject claims *allowable*,

except for indefiniteness objections unrelated to the "in response" language (Beamer

Supp. ¶ 41). Although Ampex then cancelled those claims, it substituted a new set of

claims. (Beamer Supp. ¶ 42). Ampex told the Examiner that the new claims were

distinguishable over the same prior art as was distinguished before, on the same basis:

> [The claimed invention] has a major advantage over the Boyd, Quantel
> system ... because the Boyd, Quantel reference does not store a reduced
> image *automatically* with the full size counterpart *each time* a full size
> image in the frame buffer is to be stored on disk. (Cavallerano ¶ 60).

Before those claims were allowed, Ampex subsequently inserted "responsive to" language into the claims that issued as claims 7, 8, 12 and 14. (Beamer Supp. ¶ 43; Storer Ex. A). And after so amending the claims, Ampex again distinguished them over the art by arguing that:

> Applicant's invention on the other hand, as described and claimed, provides image reduction via his size reducer (26) coupled only to the frame store (22), and which receives the full size image only from the frame store *whenever there is no reduced size image*, and which then returns the reduced size image directly back to the frame store for storage thereof simultaneously with the corresponding full size image. (Cavallerano ¶ 66).

The above phrase, "whenever there is no reduced size image," in the context of the passage, establishes that the reduced size image is automatically generated for each full size image that is to be stored. This confirms that the unequivocal disavowal of claim scope — a disavowal of manual operation — applies to these issued claims.

Kodak is off base in arguing that "responsive to the random access memory" merely means "coupled to the random access memory." (Kodak Br. 31). When first added to the prosecution, the application claims that led to claims 8, 12 and 14 used the words "coupled to" instead of "responsive to." (Beamer Supp. ¶ 44; Storer Ex. A). The "coupled to" language was removed, and "responsive to" was inserted in its place. Now, under the guise of claim construction, Kodak wants to put it back. That attempt to rewrite history should be rejected.

Kodak also repeats its mistaken argument that the claim 7 requirement of selective generation of reduced size images is somehow incompatible with automatic operation. (Kodak Br. 33). It is not, *supra*, Section VI.

Kodak also relies on the statement in the '121 specification that "A central processing unit is connected to receive user commands through a user console and to

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control the other devices of the system *in response* thereto." ('121 patent, 2:25-28).

However, this must be considered together with a similar statement later in the patent:

> A central processing unit (CPU) 16 formed from a Z80 microprocessor is
> connected to receive operator commands from a user console 18. CPU 16
> is connected for bidirection communication of commands and other data
> over a system bus 20. ('121 patent, 3:34-39).

These statements support Ampex's construction: The CPU receives user commands, and

in response automatically issues its own commands over the system bus to the other

components in the system.

Kodak also misconstrues the statement in the specification that the size reducer

"may" be employed. (Kodak Br. 33). This relates to originally claimed "review-only"

embodiments that did not have a size reducer. These claims were subsequently

cancelled. All of the issued claims require a size reducer, and so this language in the

specification is not relevant. (Ampex Br. 32).

In addition to the "responsive to" language in the claims, other explicit claim

language dictates Ampex's constructions regarding automatic operation and order of

operations and steps. (Ampex Br. 23). For example, such requirements as "random

access memory for storing video pixel data" (claim 7) connote automatic operation. This

is confirmed by the prosecution history of claim 1, which, although not in suit, has

analogous language: "frame store means for receiving and storing [an image]." Before

issue, this portion of the claim was worded: "frame store means which is operable in a

first mode for receiving and storing [an image]." (Beamer Supp. ¶ 45). However, in an

Office Action the Examiner objected to the word "operable":

> Throughout the claims the use of the term "operable" is indefinite because
> it is not clear if the term is used to recite how the means actually operates
> or how the means is capable of operating. The examiner notes that any
> video processing circuit comprising a computer and sufficient memory is
> considered to be capable of the recited operation if appropriately
> programmed. Clarification is needed. (Beamer Supp. ¶ 45).

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In response, Ampex revised, for example, the above limitation of claim 1 to read as issued. (Beamer Supp. ¶ 46). Thus, in the claims, elements reciting a structure "for" performing an action must be construed as actually performing the action, not simply being capable of doing so. This militates against a construction where the apparatus passively awaits a user's manual operation to invoke the claimed action.

Advanced Medical Optics, Inc. v. Alcon, Inc., et al., 361 F. Supp. 2d 370, 380-82 (D. Del. 2005) is instructive on whether to construe claims to require automatic operation. In that case, this Court construed the phrase "sensing a vacuum level in the handpiece." A dispute there dealt with whether this step could be accomplished in any manner, including by a human, or whether the device itself had to perform that operation automatically. This Court looked to the claim language and the specification, and held that automatic operation was required. The Ampex case is even more compelling, because the prosecution history contains unequivocal disavowals of manual operation.

B.   Order Of Operations And Steps

Kodak disputes that the claims require that the generation and the storage of the reduced size image take place prior to storage of the images on bulk store. (Kodak Br. 35-37). As Ampex has demonstrated, the claims do impose that order of operations and steps. (*Constructions 26-28*; Ampex Br. 22-25).

In an attempt to challenge this, Kodak quotes, out of context, Ampex's expert, to the effect that the '121 patent does not require generation of reduced size images prior to storage. (Kodak Br. 35). This testimony refers to the exception that proves the rule. As can be seen from the transcript (Kodak Appendix A-620), and as confirmed by Kodak's discussion of this testimony in its brief (Kodak Br. 35-36), the testimony at this point related to paragraph 146 of Mr. Cavallerano's expert report, which is substantially the same as paragraph 76 of Mr. Cavallerano's declaration submitted for claim construction.

(Beamer Supp. ¶ 47). That paragraph discusses an optional feature of the '121 patent, which corrects a missing reduced size image when, for example, a non-conforming removable disk is inserted into the system, *supra*, p. 24. In that exceptional case, the reduced size image is not generated before the full size image is stored on disk, because when the full size image was stored, the disk that it was stored on was not operating in the environment of the '121 invention. Thus, Kodak's reliance on this testimony is totally misleading.

Kodak also relies on the fact that, for claim 7 (application claim 18), the words "prior to" were removed during the prosecution. (Kodak Br. 36). Kodak mischaracterizes the prosecution history. First, it implies that this change was made in response to a rejection. Not true. In the Office Action preceding the Amendment in question, claim 18 was rejected on various indefiniteness grounds, none of which related to the "prior to" language. In addition, the Examiner indicated that the claim was allowable once the indefiniteness objections were resolved. (Beamer Supp. ¶48).

In the next amendment, Ampex addressed the indefiniteness objections, and in the course of doing so changed the language of the claim from "storing the video pixel data representing said reduced size image in said random access memory means prior to storage of the contents of said random memory means in said memory means" to "transferring the video pixel data representing said reduced image to the contents of said memory means via said random access memory means." (Beamer Supp. ¶ 49). Despite removal of "prior to," the claim still required that the reduced size image be stored in random access memory prior to being stored in "memory" (ultimately renamed "bulk memory"), because the transfer to memory was "via said random access memory means." Thus, this amendment in no way undercuts Ampex's claim construction.

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In addition, the order of steps was confirmed by a statement made by Ampex about this claim after the words "prior to" were removed. In distinguishing the cited art, Ampex distinguished this claim:

> Applicant's invention on the other hand, as described and claimed, provides image reduction via his size reducer (26) coupled only to the frame store (22), and which receives the full size image only from the frame store whenever there is no reduced size image, and which *then returns* the reduced size image directly back to the frame store for storage thereof simultaneously with the corresponding full size image. (Cavallerano ¶ 66).

Thus, the Prosecution History uniformly compels Ampex's construction of the claims requiring that the reduced size image be generated prior to the full size image being stored.

XIII. FULL SIZE AND REDUCED SIZE IMAGE DATA STORED IN RAM SIMULTANEOUSLY; SIZE REDUCER TRANSFERS AND RECEIVES DATA ONLY FROM RAM

The plain language of claims 7, 8 and 10, and the unequivocal disavowals of claim scope during the '121 prosecution, require that for those claims: (i) data representing each full size image and data representing each corresponding reduced size image must be stored in RAM simultaneously; and (ii) the size reducer must transfer data to, and receive data from, only the random access memory. (*Constructions 17, 25*; Ampex Br. 30-31). These construction issues, and the pertinent prosecution history statements, are closely related to the "direct transfer" limitation, previously discussed, that also applies to these claims, *supra*, Section III.

The prosecution history disavowal occurred when Ampex distinguished these claims over the Taylor '776 patent, during an extended dialog, the most important portion of which is quoted in full, *supra*, p. 16. In particular, for the "simultaneously" limitation, Ampex unequivocally stated, with respect to the claims that issued as claims 7, 8 and 10:

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> Applicant's invention ... returns the reduced size image directly back to
> the frame store for storage thereof simultaneously with the corresponding
> full size image.
>
> <div align="center">* * *</div>
>
> .... Taylor et al fails to store both the full size image <u>and</u> its reduced size
> version in his frame store as described and claimed by applicant.
>
> <div align="center">* * *</div>
>
> Taylor et al fails to teach the above features of storing both image sizes
> simultaneously in the random access memory....
>
> (Cavallerano ¶¶ 66-67).

Likewise, for the size reducer/RAM limitation, Ampex's unequivocal disavowal

included:

> Applicant's invention on the other hand, as described and claimed,
> provides image reduction via his size reducer (26) coupled only to the
> frame store (22), and which receives the full size image only from the
> frame store whenever there is no reduced size image, and which then
> returns the reduced size image directly back to the frame store for storage
> thereof simultaneously with the corresponding full size image.
>
> <div align="center">* * *</div>
>
> Taylor et al fails to teach the above features of ... direct transfer of images
> between the disc storage and random access memory....
>
> (Cavallerano ¶¶ 66-67).

These arguments distinguished Taylor '776, because, in Taylor:

> any size reduction, and thus <u>reduced</u> size image, is made on the full size
> image only at the time the latter is transferred from the disk storage
> (18/20) to the frame store (24/124/125) as depicted in FIG'S 5, 18 and 19,
> or from the frame store to the disc storage as depicted in FIG. 19.
> (Cavallerano ¶¶ 66, 68).

These fundamental architectural differences between the '121 patent and Taylor '776 are

illustrated in the Figures of Cavallerano Exs. B and C. (*See also* Cavallerano ¶¶ 62-70).

In disputing the limitation regarding the interaction between the size reducer and

RAM, Kodak points out that there is an arrow on the '121 Figure that shows a flow of

data from the size reducer to the bulk store (disk store), bypassing the RAM (frame

store). Kodak further points out that this connection is discussed in the patent, and was

added by amendment during the prosecution. (Kodak Br. 37-38). As previously

explained, however (Ampex Br. 31), Kodak's reliance on these facts is misplaced.

<div align="center">38</div>

Before the above discussed clear disavowals of coverage, the patent specification did provide for, as an option, direct connection from the size reducer to the bulk store. Indeed, at one point, application claim 20 specifically claimed this optional connection. However, by the time that the above-discussed statements were made, Ampex had amended claim 20 so it specifically *did not* claim this connection, but rather provided data to the bulk store "via the random access memory means." (Beamer Supp. ¶ 50).

As to the "simultaneously" requirement, Kodak admits that claim 10 has such a requirement, but argues that claims 7 and 8 do not literally require simultaneity of full and reduced size image data in RAM. (Kodak Br. 38). However, the above discussed clear disavowals of claim scope nonetheless impose such limitations.

XIV. SIZE REDUCING MEANS

Kodak argues that the structure of the "means responsive to said random access memory means for selectively generating [reduced size images]" is insufficiently disclosed. (Kodak Br. 39). However, the evidence is all one way, to the effect that size reducers were well known structures as of 1983, and so there was no need to specify further unnecessary implementation details in the specification. (Ampex Br. 38-40).

Kodak also asserts that the "size reducing means" of claims 8 and 14, and the "size reducer means" of claim 12, are covered by Section 112(6). (Kodak Br. 39-40). For the same reasons that the "means responsive" of claim 7 is adequately disclosed, these claim elements are sufficiently structural, and so do not invoke the provisions of 35 U.S.C. § 112, ¶ 6. (Ampex Br. 38-40).

CONCLUSION

For the foregoing reasons, and as further elaborated in its Opening Claim

Construction Brief, Ampex respectfully requests that its proposed claim construction be

adopted by the Court.

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